WHAT IS CLAIMED IS:

SUB A1

1. A telephone call and voice processing system comprising:

switching circuitry adaptable for receiving a call, wherein the switching circuitry is adaptable for connecting the call to a telecommunications device coupled to the system; and

voice processing circuitry adaptable for automatically interacting with the call, wherein the switching circuitry and the voice processing circuitry are controlled by a single processing means.

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2. The system as recited in claim 1, wherein the voice processing circuitry further comprises a signal processing circuitry coupled to the single-processing means.

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3. The system as recited in claim 2, wherein the switching circuitry further comprises a digital cross-point matrix coupled to the single-processing means and to the signal processing circuitry.

4. The system as recited in claim 3, wherein the switching circuitry further comprises:

a first codec adaptable for receiving the call from a CO, the first codec coupled to the digital cross-point matrix.

5. The system as recited in claim 4, wherein the switching circuitry further comprises:

circuitry, coupled to the digital cross-point matrix, adaptable for coupling the call to an extension telephone.

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6. The system as recited in claim 1, wherein the single processing means is controlled by a single set of software operable for controlling both the switching circuitry and the voice processing circuitry.

7. The system as recited in claim 3, wherein the telecommunications device is a facsimile machine, which is coupled to the digital cross-point matrix through a codec.

8. The system as recited in claim 3, wherein the voice processing circuitry includes circuitry for playing stored sound or data to the call.

9. The system as recited in claim 8, wherein the circuitry for playing stored sound or data to the call further includes:

a codec coupled to the digital cross-point matrix;

a transformer coupled to the codec; and

an analog sound source coupled to the transformer.

10. The system as recited in claim 8, wherein the circuitry for playing stored sound or data to the call further includes:

digitized stored sound or data stored in a hard disk coupled to the single processing means;

circuitry for transferring the digitized stored sound or data from the hard disk to a play buffer in the signal processing circuitry; and

circuitry for transferring the digitized stored sound or data from the play buffer to the call.

11. The system as recited in claim 3, wherein the telecommunications device is a modem coupled through a codec to the call.

12. The system as recited in claim 2, wherein the signal processing circuitry further includes:

a DTMF receiver operable for recognizing DTMF tones from the call.

13. The system as recited in claim 2, wherein the signal processing circuitry further includes:

a recording buffer operable for recording the call.

14. The system as recited in claim 2, wherein the signal processing circuitry further includes:

a fax tone detector operable for recognizing fax signals from the call.

15. The system as recited in claim 2, wherein the signal processing circuitry further includes:

a caller ID modem operable for recognizing caller ID signals from the call.

16. The system as recited in claim 2, wherein the signal processing circuitry further includes:

a call processing tone generator operable for generating and transmitting to the call standard call processing tones.

17. The system as recited in claim 2, wherein the signal processing circuitry further includes:

a conference bridge operable for coupling the call to one or more internal or external telecommunications devices.

18. The system as recited in claim 1, further comprising circuitry operable for recording all or a portion of the call.

19. The system as recited in claim 18, wherein the recording circuitry operates in response to a tactilely initiated activating signal.

20. The system as recited in claim 19, wherein the recording circuitry further comprises:

circuitry for coupling a recording buffer in the signal processing circuitry to the call, wherein the signal processing circuitry is coupled to the single processing means.

21. The system as recited in claim 19, wherein the tactilely initiated activating signal is produced when a user presses a record button on an extension telephone coupled to the system.

22. The system as recited in claim 1, wherein said single processing means is a single microprocessor.

23. The system as recited in claim 3, further comprising:

a play channel in the signal processing circuitry for playing a message to the caller, wherein the message is downloaded from a memory coupled to the single processing means;

a DTMF receiver in the signal processing circuitry for receiving DTMF tones sent from the call; and

circuitry for connecting the call to the telecommunications device in response to the DTMF tones.

24. The system as recited in claim 1, further comprising:

circuitry for listening to a voice signal at a telephone extension coupled to the system;

circuitry for activating a recording sequence to record the voice signal; and

circuitry for storing the recorded voice signal in a digital memory.

25. The system as recited in claim 24, wherein the activating circuitry is tactilely initiated by a user of the telephone extension.

26. The system as recited in claim 25, wherein the voice signal originated from the call.

27. The system as recited in claim 25, wherein the voice signal originated from a voice mail message stored in the system.

28. The system as recited in claim 25, wherein the tactilely initiated activating signal is produced when the user presses a record button on the telephone extension coupled to the system.

29. The system as recited in claim 24, further comprising circuitry for storing time and date of call, and caller-id information associated with the call.

30. The system as recited in claim 24, wherein the recording of the call can be activated anytime while the call is coupled to the telephone extension.

31. The system as recited in claim 28, further comprising:

circuitry for deactivating the recording of the call in response to a pressing of the record button by the user.

32. An apparatus operable for providing information stored in a telephone call/voice processor system to a user at a telephone extension without having to call a resource storing the information, the apparatus comprising:

circuitry for receiving an activation signal from the telephone extension;

circuitry for coupling the telephone extension to a play channel of a signal processing circuitry;

circuitry for downloading the information to the play channel from a memory; and

circuitry for playing portions of the information to the user via the telephone extension.

33. The apparatus as recited in claim 32, wherein the portions of the information are played in response to receipt of signals activated by the user on the telephone extension.

34. The apparatus as recited in claim 32, wherein the system is controlled by a single processing means coupled to the signal processing circuitry, and wherein the memory is coupled to the single processing means.

35. The apparatus as recited in claim 32, wherein the activation signal is tactilely initiated by the user of the telephone extension.

36. The apparatus as recited in claim 35, wherein the activation signal is initiated by a pressing of a button on the telephone extension by the user.

37. The apparatus as recited in claim 33, wherein the information includes a menu of options for permitting the user to select which of the portions are played in response to the signals activated by the user.

38. The apparatus as recited in claim 35, further comprising:

circuitry for receiving another signal tactilely initiated by the user of the telephone extension, wherein the another signal includes coding indicating a content of the information; and

circuitry for retrieving the information having the content from the memory and providing it to the play channel.

39. The apparatus as recited in claim 38, wherein the signals are activated by the user while the telephone extension is connected to a call.

40. A method for providing information stored in a telephone call/voice processor system to a user at a telephone extension, the method comprising the steps of:

receiving an activation signal from the telephone extension;

coupling the telephone extension to a play channel of a signal processing circuitry;

downloading the information to the play channel from a memory; and

playing portions of the information to the user via the telephone extension.

41. The method as recited in claim 40, wherein the portions of the information are played in response to receipt of signals activated by the user on the telephone extension.

42. The method as recited in claim 40, wherein the system is controlled by a single processing means coupled to the signal processing circuitry, and wherein the memory is coupled to the single processing means.

43. The method as recited in claim 40, wherein the activation signal is tactilely initiated by the user of the telephone extension.

44. The method as recited in claim 43, wherein the activation signal is initiated by a pressing of a button on the telephone extension by the user.

45. The method as recited in claim 41, wherein the information includes a menu of options for permitting the user to select which of the portions are played in response to the signals activated by the user.

46. The method as recited in claim 43, further comprising the steps of:

receiving another signal tactilely initiated by the user of the telephone extension, wherein the another signal includes coding indicating a content of the information; and

retrieving the information having the content from the memory and providing it to the play channel.

47. The method as recited in claim 46, wherein the signals are activated by the user while the telephone extension is connected to a call.

48. A method for broadcasting a voicemail message to a plurality of mailboxes comprising the steps of:

receiving an activation signal from a user at a telephone extension;

prompting the user to enter a first signal for a first of the plurality of mailboxes to receive a copy of the message;

receiving the first signal;

prompting the user to enter a second signal for a second of the plurality of mailboxes to receive a copy of the message;

receiving the second signal; and

copying the message to the first and second mailboxes.

49. The method as recited in claim 48, further comprising the step of:

recording an introductory message by the user to be stored along with the copy of the message in each of the first and second mailboxes.

50. The method as recited in claim 48, wherein the activation signal is initiated by the user while the user is listening to the voicemail message.

51. The method as recited in claim 48, wherein said first and second signals are each actuated by single keystrokes.

52. The method as recited in claim 48, further comprising the step of recording the message by the user before the copying step.

53. The system as recited in claim 1, further comprising:

circuitry for receiving an activation signal from a user at a telephone extension coupled to the system;

circuitry for prompting the user to enter a first code for a first of a plurality of mailboxes to receive a copy of the message;

circuitry for receiving the first code;

circuitry for prompting the user to enter a second code for a second of the plurality of mailboxes to receive a copy of the message;

circuitry for receiving the second code; and

circuitry for copying the message to the first and second mailboxes.

54. The system as recited in claim 53, further comprising:

circuitry for recording an introductory message by the user to be stored along with the copy of the message in each of the first and second mailboxes.

55. The system as recited in claim 53, wherein the activation signal is initiated by the user while the user is listening to the voicemail message.

56. The system as recited in claim 53, wherein the first and second signals are each actuated by single keystrokes.

57. The system as recited in claim 53, further comprising circuitry for recording the message by the user before copying the message to the first and second mailboxes.

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58. In a telephone call and voice processing system comprising switching circuitry adaptable for receiving a call, wherein the switching circuitry is adaptable for connecting the call to a telecommunications device coupled to the system, and voice processing circuitry adaptable for automatically interacting with the call, wherein the switching circuitry and the voice processing circuitry are controlled by a single processing means., a method comprising the steps of:

listening to a voice signal at a telephone extension coupled to the system;

activating a recording sequence to record the voice signal; and

storing the recorded voice signal in a memory.

59. The method as recited in claim 58, wherein the activating step is tactilely initiated by a user of the telephone extension.

60. The method as recited in claim 58, wherein the voice signal originated from the call to the system.

61. The method as recited in claim 58, wherein the voice signal originated from a voice mail message stored in the system.

62. The method as recited in claim 59, wherein the tactilely initiated activating signal is produced when a user presses a record button on the telephone extension coupled to the system.

63. The method as recited in claim 58, further comprising the step of storing time and date of call, and caller-id information associated with the call.

64. The method as recited in claim 60, wherein the recording of the call can be activated anytime while the call is coupled to the telephone extension.

65. The method as recited in claim 62, further comprising the step of:

deactivating the recording of the call in response to a pressing of the record button by the user.

66. The system as recited in claim 1, further comprising circuitry for permitting a user of a telephone coupled to the system to monitor a voicemail message while the message is being recorded into the user's mailbox.

67. The system as recited in claim 66, further comprising circuitry for permitting the user to converse with a person leaving the message.

68. The system as recited in claim 67, wherein the user is able to converse with the person leaving the message by going on-hook, which terminates a path between the person leaving the message and the user's mailbox, and which connects the person leaving the message with the user's telephone.

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